NORTH ISLAND NAVAL AIR STATION
SAN DIEGO, CALIFORNIA

Engineering Field Division/Activity:	SOUTHWESTDIV
Major Claimant:	CINCPACFLT
Size:	2,520 Acres
Funding to Date:	$33,201,000
Estimated Funding to Complete:	$90,578,000
Base Mission:	Maintains and operates facilities and provides services and materials to support operations of aviation activities
Contaminants:	Heavy metals (arsenic, chromium, copper, lead), PCBs, volatile and semi-volatile organic compounds

Number of Sites:		**Relative Risk Ranking of Sites:**			
CERCLA:	1	**High:**	9	**Not Evaluated:**	0
RCRA Corrective Action:	16	**Medium:**	3	**Response Complete:**	6
RCRA UST:	2	**Low:**	1	**Total Sites:**	19
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EXECUTIVE SUMMARY

Naval Air Station (NAS) North Island is located at the northern end of the peninsula that forms the San Diego Bay and borders the city of Coronado. Waste generation operations at NAS North Island that contributed to contaminated sites on the facility center around maintenance and repair of aircraft. In the past, liquid wastes were disposed of in the storm drain system which emptied into San Diego Bay and caused heavy metal contamination of bay sediments. Other primary sites of concern include a storage site where transformers containing oils with the chemical additive PCB leaked and a marsh, surface disposal area, pits, and landfills where liquid and solid wastes were disposed. Current operations include pollution prevention technologies to prevent further contamination. A Federal Facilities Compliance Agreement and a Cleanup and Abatement Order were issued in FY88 for the Industrial Waste Treatment Beds (Site 11). NAS North Island was issued a RCRA Hazardous Waste Facility Permit in FY89 and is expecting the permit to be reissued in FY96. As a result of the permit, all CERCLA sites must now comply with both RCRA and CERCLA requirements.

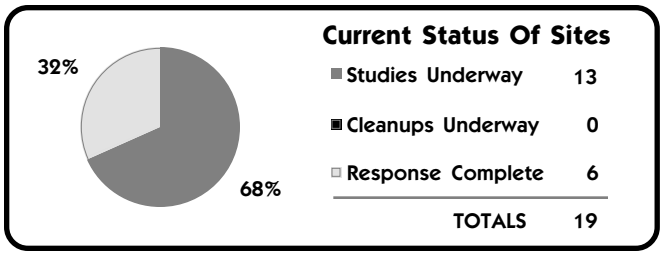
NAS North Island is bordered on the north and west by San Diego Bay and on the south by the Pacific Ocean. The east side of the base borders the City of Coronado which is predominantly residential. Presently, most of the surface drainage is controlled through storm drainage as the majority of the island is paved. The local community is concerned with the potential for contaminated groundwater to migrate toward the community. However, there is minimal potential for contamination in the groundwater to migrate off-base. Also, any migration of contaminants is toward the bay rather than the local community.

A Restoration Advisory Board (RAB) was established in FY94. The RAB consists of approximately 15 community members and a like number of military-related personnel. The RAB meets on a monthly basis. A Community Relations Plan (CRP) was completed in FY92. Two information repositories, one at the base library and the other at the Coronado Public Library were established in FY92.

Currently, the majority of the sites are in the RCRA Facility Investigation (RFI) or Corrective Measures Study (CMS) phase. Eight RCRA Interim Measures/CERCLA removal actions have been completed and three are underway.

RFIs will have been completed at 15 sites and CMSs at 10 sites by the end of FY99. A final cleanup action is expected for approximately two-thirds of the sites.

NAS North Island is one of two installations in the Navy Environmental Leadership Program (NELP). The objective of NELP is to demonstrate innovative cleanup technologies and to help export successful technologies to other naval facilities. In addition, the EPA Superfund Innovative Technology Evaluation (SITE) Program is being used to do treatability studies at NAS North Island. The NELP and the SITE program have similar goals in terms of generating reliable performance and cost information on the technologies for use in evaluating cleanup alternatives for similarly contaminated sites.



NORTH ISLAND NAS
RELEVANT ISSUES

ENVIRONMENTAL RISK

HYDROGEOLOGY - NAS North Island is bordered on the north and west by San Diego Bay and on the south by the Pacific Ocean. Due to the general lack of relief, and the relative small size of the island, there is no pronounced surface drainage pattern. Two sloughs along the south coastline are the only identifiable natural surface drainages on the island. Presently, most of the surface drainage is controlled through storm drainage as the majority of the island is paved. Due to a slight gradient and minimal groundwater movement, minor measurable migration of contaminants from waste disposal sites has been detected. Almost all of North Island is covered with soils with a relatively low permeability. In the past, fresh groundwater was reported to emanate from springs near the southern shore of North Island. Past data indicates the existence of a 60 foot thick aquifer. When the majority of North Island was paved, and the runoff directed to the sea through storm sewers, recharge to the water table was reduced. Since that time, the fresh water has been displaced by intruding sea water. Potable water supply for North Island has been piped in from San Diego since the early 1900s.

NATURAL RESOURCES - The San Diego Bay is a major spawning area for ocean fishes and an integral element in the interconnected food web of the adjacent ocean waters. The bay is also used for numerous recreational activities such as power boating, sailing, water skiing, fishing, swimming, clamming and wading. Numerous species of marine and shore birds frequent the shoreline and some inland areas of North Island. Most of the nesting birds and a large population of black-tailed jackrabbits inhabit the unpaved and relatively undisturbed areas near runways and along the shoreline. Over 15 bird species reportedly nest at NAS North Island including significant populations of black crown night heron, burrowing owl, western gull, and the endangered California least tern. The snowy plover, listed as rare, also inhabits the station.

RISK - Baseline Human Health Risk Assessments and Ecological Risk Assessments are being conducted on a site by site basis as part of the Remedial Investigation/Feasibility Study. Nine sites were ranked as high relative risk, under the DOD Relative Risk Ranking System. The high ranking was due to contaminated soil or sediments for seven of the sites and contaminated groundwater for six of the sites.

REGULATORY ISSUES

NATIONAL PRIORITIES LIST - NAS North Island is currently not listed or proposed for listing on the National Priorities List (NPL). The state has requested that EPA not propose the installation for listing on the NPL so the state can continue to work with the Department of the Navy to clean up sites under RCRA and CERCLA.

LEGAL AGREEMENTS - In December 1989, a RCRA Hazardous Waste Facility permit was issued to NAS North Island. To expedite the cleanup process, the Department of the Navy and EPA negotiated language into the installation's RCRA permit to allow the Department of the Navy latitude in choosing CERCLA or RCRA to address the contaminated sites. The permit specifies that the Department of the Navy must meet RCRA Corrective Action requirements; however, the Navy may submit information developed under the Installation Restoration Program (IRP) provided the IRP information clearly indicates how the RCRA requirements are met. As a result of the RCRA permit, all 12 CERCLA sites have been transferred and will be tracked as RCRA Corrective Actions. However, the Defense Environmental Restoration Program (DERP) requires all DOD facilities to comply with CERCLA. In order to meet both regulatory requirements, one document is being prepared for each phase of work that meets the requirements of both programs.

PARTNERING - Two teambuilding sessions have been held with regulators: a two day session in 1991 and a two day session in 1993.

NAS North Island is one of two installations in the Navy Environmental Leadership Program (NELP) that was initiated in May 1993. The other NELP installation is Mayport NS. This program is designed to "showcase" an activity for total environmental management through the demonstration of new and innovative technologies and management techniques to achieve and maintain environmental compliance and facilitate restoration. An NAS North Island NELP Team was formed in June 1993 and consists of personnel from the activity, Naval Facilities Engineering Field Division Southwest, regulators, and a NELP contractor. The Team is in the process of developing a Management Action Plan (MAP) that will be used as an active tool to document the status of all environmental programs at the installation and to provide direction for future actions required to maintain regulatory compliance. The draft MAP was completed in February 1994. In addition, the Team is pursuing innovative cleanup technologies for the existing sites. The NELP contractor has provided an initial screening of new technologies specific to NAS North Island's sites. In addition, the EPA Superfund Innovative Technology Evaluation (SITE) program is being used to do treatability studies on removing the chemical additive PCB and groundwater remediation technologies. The NELP has brought two EPA SITE Technologies to North Island and is working on six others (some pilot studies and demonstrations have been conducted).

COMMUNITY INVOLVEMENT

RESTORATION ADVISORY BOARD - The Technical Review Committee (TRC) was formed in November 1990. The TRC was converted to a Restoration Advisory Board (RAB) in 1994. The RAB consists of approximately 15 community members and a like number of military-related personnel. The RAB functions well and participation is active. The RAB has been active in selection of technologies. In one instance the RAB objected to the selected technology and was instrumental in selecting an alternate technology which is now being implemented. NAS North Island has also been designated by the Chief of Naval Operations to be a pilot facility for RABs and to prototype a facility specific Pollution Prevention Plan.

COMMUNITY RELATIONS PLAN - The Community Relations Plan (CRP) was completed in November 1991. Several Fact Sheets have been released each year.

INFORMATION REPOSITORY - Two Information Repositories, one at the base library and the other at the Coronado Public Library, were established and two public meetings were held in February 1992. Information from the Administrative Record was placed in the information repositories for public access.

North Island NAS
HISTORICAL PROGRESS

FY83

Sites 1-12 - Twelve potentially contaminated sites were identified during the Initial Assessment Study (IAS), equivalent to a Preliminary Assessment (PA), completed in September 1983. Four sites (Sites 1, 6, 9, and 10) were recommended for further investigation. The study found that Sites 2-5, 7, 8, 11 and 12 posed no threat to human health or the environment, and no further action was recommended. EPA accepted the recommendation made in the IAS of no further action at Site 8, but expressed reservations about the recommendation for no further action at Sites 2-5, 7 and 12.

FY85

Sites 1, 6, 9 and 10 - A Verification Study, equivalent to a Site Inspection (SI), was completed in March 1985. The SI found elevated levels of cadmium, copper, and lead in sediment at the Shoreside Sediments (Site 1); the chemical additive PCB in soil at the Heritage Park Public Works Salvage Yard (Site 6); organic halide contamination in soil at the Chemical Works Disposal Area (Site 9); and heavy metals in soil at the Defense Property Disposal Area (Site 10).

FY88

Site 11 - A Federal Facilities Compliance Agreement (FFCA) was issued in 1988, and a Cleanup and Abatement Order was issued in June 1988, for the Industrial Waste Treatment Beds (Site 11). The FFCA requires the Department of the Navy to submit a report characterizing the hydrogeology beneath Site 11, including an evaluation of tidal effects and the hydraulic gradient; submit a proposed groundwater monitoring plan; construct new groundwater monitoring wells; and submit a post-closure plan in accordance with 40 CFR 264.118. The Cleanup and Abatement Order, issued by the California Regional Water Quality Control Board, requires the Department of the Navy to submit a technical cleanup plan, an effective remedial action plan to immobilize the chlorinated hydrocarbon plume, and quarterly monitoring reports. The FFCA Site Characterization Study for Site 11 began in December 1988 and was completed in January 1995. Hydrogeologic Assessment Report was completed in June 1988 for the Industrial Waste Treatment Beds (Site 11) and reported volatile organic compounds, cyanide, and metals contamination in soil.

FY89

SWMU 1002 - A RCRA Facility Assessment (RFA), completed in April 1989 by the California Department of Health Services, identified 81 potential solid waste management units (SWMUs) and three Areas of Concern (AOC) at NAS North Island. SWMUs 1-12 are the same as CERCLA Sites 1-12. SWMUs 8 and 13-81 were recommended for no further action. Of the three AOCs, only AOC 2, the Hazardous Waste Collection, Storage and Transfer Facility, was recommended for further action due to concerns about soil contamination. This is now SWMU 1002.
Site 5 - Under California requirements, a Solid Waste Assessment Test (SWAT) and a Solid Waste Air Quality Assessment Test (SWAQAT) were completed in December 1988 for the Golf Course Garbage Disposal Area (Site 5). The SWAT found volatile organic compound contamination in the groundwater.
Site 6 - An interim measure which consisted of covering the site with plastic weighted down with sand was completed at the Seaview Heritage Park Salvage Yard.

FY91

SWMUs 82 and 83 - After completion of the RFA, two additional SWMUs, SWMU 82 and 83, were identified in FY91. SWMU 82, Bldg. 472 Sump, is now identified as part of the Industrial Waste Treatment System and will be handled under RCRA closure. SWMU 83, the Old Circular Runway, required further action.

FY92

SWMU 83 - RCRA Facility Investigation (RFI) was completed at SWMU 83. No further action was recommended. This site is expected to be closed upon approval of the new RCRA permit in FY96.
Sites 4 and 6 - Two separate removal actions involving the installation of fencing to restrict access to the sites were completed at Site 4 in August 1992 and at Site 6 in September 1992.

FY93

SWMU 1002 - RFI was completed at SWMU 1002. No further action was recommended. This site is expected to be closed after approval of the new RCRA permit in FY96.

FY94

Sites 2-4, 7 and 12 - An SI was begun in September 1991 for Sites 2, 3, and 12 and another SI was begun in December 1991 for Sites 4 and 7. Both SIs were completed in December 1993 and the five sites were recommended for further action.
UST 1 - Underground Storage Tank (UST) 1 includes nine leaking USTs which are being addressed under the RCRA Corrective Action Program. These USTs were identified as potential SWMUs (SWMUs 112-114, and 126-131) and the investigation was conducted as a Phase I RFI to meet state requirements. The Phase I RFI involved sampling to characterize the nature and extent of contamination and was completed in FY94.
UST 2 - UST 2 involved 15 abandoned USTs that were leaking petroleum. The investigation of UST 2 was completed in FY94. All tanks were either removed or closed in place by April 1994.

PROGRESS DURING FISCAL YEAR 1995

FY95

Site 2, 3, 7 and 12 - RFIs were underway.
Sites 1, 4, 5, 6, 7 and 9-11 - Corrective Measures Studies **(**CMSs) were underway.

Site 1 - A bioassay and sampling and analysis work plan for the Shoreside Sediment outfalls was completed.
Sites 4, 6 and 10 - Time-critical removal actions were underway for washing the soil containing the chemical additive PCB under a Remedial Action Contract (RAC).

PLANS FOR FISCAL YEARS 1996 AND 1997

FY96

Sites 2, 3, 7 and 12 - RFIs will be complete.
Sites 4, 6 and 10 - Complete removal action to excavate and treat soil contaminated with the chemical additive PCB on-site.
Site 2 - Complete removal action to remove incinerator ash and cap Old Spanish Landfill.

FY97

Sites 1-4, 6, 7 and 9 - Corrective Measures Studies (CMSs) will be complete.
Site 11 - An Engineering Feasibility Study and a CMS will be completed in December 1996 at Site 11, the Industrial Waste Treatment Beds. As part of the industrial waste treatment plant, Site 11 will undergo RCRA closure and post-closure monitoring will be required through FY02. Based on preliminary results from the Site Characterization Study, the site is expected to require corrective action as part of the closure.

North Island NAS
PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA								
SI	1							
RI/FS								
RD								
RA								
IRA								
RC	1							
Cumulative Response Complete	100%							

RCRA CA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
RFA	14							
RFI	10		4			1		
CMS				7	2	1		
DES					4	4		
CMI						3	3	2
IRA	3(4)	1(3)	4(6)	3(4)	4(4)	1(1)		
RC	4		1	1		2	1	7
Cumulative Response Complete	25%		31%	38%		50%	56%	100%

UST	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
ISC					1			
INV	1							
CAP								
DES								
IMP								
IRA	1(1)				1(1)			
RC	1				1			
Cumulative Response Complete	50%				100%			